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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/063,141	03/25/2002	Jae Kwang Park	2002-1	2715
28331	7590	09/29/2004	EXAMINER	
JAE KWANG PARK 909 SAUK RIDGE TRAIL MADISON, WI 53717-1188			SAFAVI, MICHAEL	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/063,141	PARK ET AL.	
	Examiner	Art Unit	
	M. Safavi	3673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on March 25, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because: 1) reference character "1" has been used to designate a *filtering apparatus* and a *root zone layer* and a *turf surface* 2) reference character "2" has been used to designate a *lid of a filtering apparatus* and an *intermediate layer* and a *waste rubber installation*; and 3) reference character "3" has been used to designate an *internal wire mesh wall of a filtering apparatus* and a *partition* and a *drainage layer*. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

It has been noted that reference numeral 1 is used to denote three different elements of the invention, namely a *filtering apparatus*, a *root zone layer*, and a *turf surface* (see pages 7 and 8 of the disclosure). As well, numeral 2 is used to denote three different elements of the invention, namely a *lid of a filtering apparatus* and an *intermediate layer* and a *waste rubber installation*. Further, reference numeral 3 is used to denote three

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different elements of the invention, namely an *internal wire mesh wall of a filtering apparatus* and a *partition* and a *drainage layer*. Correction is required.

Claim 5 is objected to because of the following informalities: Claim 5 appears as multiple sentences. Appropriate correction is required. See M.P.E.P. 608.01(m), Each claim begins with a capital letter and ends with a period. Periods may not be used elsewhere in the claims except for abbreviations. See *Fressola v. Manbeck*, 36 USPQ2d 1211 (D.D.C. 1995). Further, where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation, 37 CFR 1.75(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bergevin.

Bergevin discloses, Figs. 1A and 2 for example, use of rubber materials for turf areas, (which may be used in place of a pea gravel layer), described in the United States Golf Association green or other specifications. The rubber materials offer lightweight characteristics to construction of turf areas in wetlands or soft soil foundations, insulation as well as absorption of contaminants. The rubber material can be seen as utilized as a backfill material for turf areas such as golf courses and athletic fields, col. 5, lines 3-7 and col. 13, lines 17-21 which would include drainage systems, col. 4, lines 34-50, for tee box and sand trap construction in which gravel applications, if any, are replaced by rubber materials. Absorption and filtration of contaminants as a part of the pollution control system can be achieved. The contact time in the Bergevin system can vary from 30 seconds to 30 minutes depending on type and concentration of contaminants to be removed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergevin in view of Thelen et al.

Thelen et al. discloses use of waste rubber materials, col. 2, lines 24-26, for turf areas, (which may be used with or in place of a pea gravel layer, col. 6, lines 33-34), described in the United States Golf Association green or other specifications. The rubber materials offer lightweight characteristics to construction of turf areas, (which may include in wetlands or soft soil foundations), insulation as well as absorption of contaminants. The rubber material can be seen as utilized as a backfill material for turf areas such as golf courses and athletic fields, col. 1, lines 17-20 which would include drainage systems, col. 1, lines 6-7, for tee box and sand trap construction in which gravel applications, if any, are replaced by rubber materials. Absorption and filtration of contaminants as a part of the pollution control system can be achieved, col. 5, line 63 to col. 6, line 5. The contact time in the Bergevin system can vary from 30 seconds to 30 minutes depending on type and concentration of contaminants to be removed, col. 5, lines 63-68. The waste rubber materials have sizes from 1 to 12 mm or from 0.1 to 10 cm, col. 2, lines 65-66. The waste rubber layer is a 2.5 to 15 cm layer, col. 2, line 67, located within the top 20 cm underneath athletic field turf surfaces, lines 4-5 of Abstract, to provide resiliency and shock absorption.

To have formed the rubber particle layer 108 from a waste rubber material having a size of from 1mm to 12 mm or from 0.1cm to 10cm, as well as form such layer with a thickness or depth of 2.5cm to 15cm and within the top 20cm underneath an athletic field, thus forming a well known lightweight, insulative and resilient underlayer which can allow for drainage while absorbing contaminants, would have been obvious to one

having ordinary skill in the art at the time the invention was made as taught by Thelen et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Safavi whose telephone number is (703) 308-2481. The examiner can normally be reached on Mon.-Thur., 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (703) 308-2978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MICHAEL SAFAVI
PRIMARY EXAMINER
ART UNIT 354**

M. Safavi
September 22, 2004